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ABSTRACT

The purposes of this 1961 study were to identify attitudes and goals of farm people in low income areas and to relate these factors and selected social and personal factors to patterns of adjustment to economic and situational conditions. The sample for the study consisted of 296 farm families in Watauga County, North Carolina. Results of the analysis indicated that family adjustment patterns were related to the following background variables: age of homemaker, age of male head, education of homemaker, education of male head, size of household, number of children away from home, family life cycle, family occupational category, and social participation of homemakers and male heads. Farm characteristics related to family adjustment patterns were size of farm, extent of farm-product change, extent of farm-use change, adoption of recommended farm practices, and amount of contact with the Extension Service. In addition, the attitude of the male head of family toward taking a nonfarm job was related to family adjustment patterns. The document is appended with narrative and tabular material relative to the study. (TL)

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NORTH CAROLINA

RURAL ADJUSTMENT STUDIES

A Study of Farm Families and Their Level of Living-Income Patterns in Watauga County, North Carolina

By

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Agricultural Experiment Station
North Carolina State College

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Finally, appreciation is expressed to the 296 households in Watauga County which furnished the basic data on which this report is based.

PREFACE

The Rural Adjustment Studies are based on the project "Factors in the Adjustment of Families and Individuals in Low Income Rural Areas in North Carolina." This is a cooperative project of the Department of Rural Sociology, North Carolina Agricultural Experiment Station, North Carolina State College, and the Farm Population Branch, Economic Research Service, United States Department of Agriculture.

The objectives of this cooperative project are:

a) To determine the relationship of selected social and personal factors, such as education, age, family and kinship, tenure, and group memberships and identifications to the adjust and adjustive behavior of individuals and families in and out of agriculture.

b) To identify attitudes and goals of farm people in low-income areas--attitudes and goals which relate to their levels and processes of adjustment and to ratings of their adjustment potentials.

c) To develop the appropriate scales and indexes for measuring or characterizing the independent and dependent variables.

These objectives are consistent with the belief that the effectiveness of adjustment programs will depend, among other things, upon the readiness and ability of affected rural people in low income areas to adopt appropriate solutions. The adoption of these solutions is affected by a number of factors--economic, physical, social and psychological. The particular emphasis of this cooperative project is on the identification of the social and psychological characteristics which are associated with various indices of adjustment.

The present project is also a participating project of Regional Cooperative Project S-44 "Factors in the Adjustment of Individuals and Families in Low Income Rural Areas."

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A STUDY OF LEVEL OF LIVING-INCOME PATTERNS OF FARM FAMILIES IN WATAUGA COUNTY, NORTH CAROLINA

Glenn C. McCann

INTRODUCTION

This report is the second of a series having to do with Watauga County, North Carolina, and its people.[1] This county was selected as one of the three low income North Carolina pilot counties for the Rural Development Program in North Carolina in 1956. This county was selected for sociological study in 1958 by the Department of Rural Sociology, North Carolina State College, in cooperation with the then Farm Population and Rural Life Branch, Agricultural Marketing Service, United States Department of Agriculture.

A survey of an area probability sample of farm families was conducted by the cooperating agencies during June and July 1959. The purpose of this initial survey was to provide information concerning background, attitudinal and situational characteristics, and circumstances relating to adjustments of farm families in a low income county.

The data analyzed in this report were obtained mainly from interviews of male heads and homemakers in the aforementioned 1959 survey of farm families, although supplemental information has been obtained from various other appropriate sources.

The principal objective in this report is an analysis of patterns composed of the attributes level of living and net family income. The four patterns are construed to represent four ways in which the families had adjusted to various economic and situational conditions at the time of the interviews.

THE COOPERATING FAMILIES

Sample Criteria and Results

The families for the survey were required to meet the following criteria: (1) all had to be farm-operator families at the time of the interview or within the past five years according to the 1959 Census of

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[1] The first report in this series is: Glenn C. McCann, The Area and Its People, N. C. Agricultural Experiment Station, Progress Report Rs-36; Raleigh, North Carolina, May, 1960.

Agriculture farm definition,[2] and (2) all families had to contain at least the farm operator and his wife.

It was requested that the sample be designed so as to yield approximately 300 such farm families.[3] Approximately 800 open country residences were screened. In 315 of these, the families met all the criteria. Interviews with the male heads and homemakers were completed in 296 of these families. This represents 94 percent of the eligible families. Two hundred ninety-four of these were white families.

Some Important Characteristics

The 296 families consisted of 193 full owners, 62 part owners, 22 tenants, and 16 families which were no longer in farming at the time of the interviews but which had been full owners within the previous five years. The exact tenure status of three additional families was not determined except it is known that these families were operating farms at the time of the interview.

The farms operated by these families ranged in size from one to 1000 acres but the typical farm in this sample, like the typical mountain farm in western North Carolina, is of modest size. The median size is 40 acres.

Farmers in this sample depended to a great extent on small Burley tobacco allotments for their principal cash crop. Many allotments consisted of 5/10 acre or less. This acreage of Burley tobacco in 1959 might be expected to have grossed about $504.[4] Nearly half the farms reported small incomes from the sale of fruits and vegetables.

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[2]According to the 1959 Census of Agriculture definition, a farm is: A place of 10 or more acres from which at least $50 worth of agricultural products were sold in the reporting year, or a place of less than 10 acres from which at least $250 worth of agricultural products were sold in the reporting year. See Farm Population Estimates for 1950-59, AMS-80 (1959), United States Department of Agriculture, Agricultural Marketing Service, Washington, D.C., February, 1960.

[3]See Appendix 1 for description of the sample.

[4]In 1959, 1321 farms in Watauga County were allocated a total of 726 acres of Burley tobacco. The average acre allotment per farm was, therefore, approximately 1/2 acre. One-half acre of Burley tobacco in 1959 would have, on the average, yielded 834.5 pounds which would have sold at $.604 per pound, or approximately $504. (Source of estimate: 1959 Census of Agriculture for acreage allotted and Dept. of Agricultural Economics, N. C. State College, for average yield and price per pound).

Modest farming operations tend to be associated with modest or low family incomes. More than eight out of every 10 farms reported gross farm incomes of less than $2500. Total net family incomes were somewhat larger--only 65 percent of the 296 families reported total net incomes of less than $2500--reflecting that many families had nonfarm incomes.

A total of 181 male heads, considerably more than half, indicated they had no job other than farming, and only 52 of the 296 homemakers worked outside the home. On the other hand, in 142 families the husband or wife or both reported working away from the farm or the farm household. It is important to note that 70 of the 296 male heads indicated farming to be their second job rather than their main job.

On the average, about four persons were living in each of the 296 households, and the family census indicated that a large number of family members were living away from home. The average size family, including members living away from home, was approximately 5.8.

The fact that so many family members were found to be living away from the household is indicative of the advanced age of many of these families--surely an important factor for adjustment. The median age for male heads was about 50 years as compared with about 46 years for homemakers. In more than six out of 10 of these families the male head, at the time of the interview, was between 40 and 59 years of age and more than one out of three families had children only beyond age 18.

One frequently recommended means of adjustment is movement of people from low income areas. This sample is made up of respondents, however, of extremely low mobility. More than nine out of 10 of the male heads and eight out of 10 of the homemakers had been born in the county--frequently on the same farm or just "down the road" from their present residence at the time of the interview. Low mobility is in turn reflected in a high incidence of home ownership. This was characteristic of approximately eight out of every 10 families. The typical house appeared to be of adequate size for the typical family at home in that it consisted of six rooms exclusive of a bath room. Most homes were quite modest, however, as indicated by the facts that only six out of every 10 homes reported a bath and only three out of every 20 homes reported a central heating plant. More than 80 percent of the homes were judged to be fair or better by the persons conducting the interviews.

The factors of education and social participation help to round out this summary sketch of the sampled respondents. Social participation at the formal level was, for the majority of the families, simply a matter of church affiliation. On the other hand, many male heads reported participating in various organizations, such as farm organizations and fraternal organizations, in addition to their church participation and several homemakers reported an active role in organizations, such as the P.T.A. or the Home Demonstration Club, in addition to their church activities.

The majority of both men and women contacted for this survey had completed seven or fewer grades of education. On the average, women had slightly more formal education than the men. However, only one out of every four homemakers had completed high school as compared with one out of every five male heads. It is important to note, in connection with adjustment potentials, that these respondents did not make up their relative lack of public school education through other educational resources. Only about one out of every six male heads and one out of every 15 homemakers had received any formal special training for craft work or occupations outside of the public school system.

RATIONALE OF THE STUDY

Material Comfort as a Value Orientation

Many commentators on the American scene have observed that Americans, by and large, are a comfort-loving and comfort-seeking people. It has been said that they are frequently willing to spend much more on material pleasures, e.g., tobacco and alcohol, than on nonmaterial essentials, e.g., public education.

Williams has discussed the relationship between the high approval given by American society to the quest of material comforts and some of the values involved. He indicates that the American standard of living really incorporates such diverse meanings as "nationalistic identification," "symbol of success," "competence," "power" and "hedonistic gratification." Moreover, Williams asserts that "the securing of material comforts elicits a desire for them" and that as wants become accepted they "come to be felt as rights to which one has a moral claim."[5]

The fact that the material level of comfort occupies such a fundamental place in the value system of American society provides considerable justification for using a measure of this material comfort level for the purpose of making comparisons between various population segments, families, groups, or individuals in the society. Such comparisons provide a relative and meaningful assessment of adjustment both between groups and with respect to a national norm. It is readily granted, however, that not all Americans share the particular characteristic of placing a high value on material comfort. Indeed many Americans for ascetic or other reasons could not be said to be particularly oriented toward the materialistic side of life.

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[5] R. M. Williams, Jr., American Society (New York: A. A. Knopf, 1951) pp. 406-409.

The Level of Living and the Standard of Living

The "level of living" of a family has reference to the actual conditions under which it lives; and a typical measure of the level of living of this family might be an arbitrary or, perhaps, highly refined inventory or index of its material possessions. The sociologist generally draws a distinction between the "level of living" and the "standard of living." "Standard of living" is a normative term and connotes some ideal condition to be striven for.[6]

It is believed that a family's standard of living is usually reflected to a considerable degree by its level of living. That is to say, within the limits imposed--largely by financial considerations--a family normally will acquire (level of living) what it desires to acquire (standard of living). In any given case the discrepancy might be large or small between a family's standard and its level, although if the above assertions of Williams are valid, it would seem that the level of living would, theoretically at least, never catch up with the standard since each material acquisition would come to be regarded as expected or normal and this state would engender the need for the acquisition of more material comforts.

A Paradigm of Adjustment

In the present study the relationship between level of living and standard of living has been conceptualized in terms of a goal approach--goal attainment schema in which families motivated in part by their differential standards of living engage in behavior that is more or less appropriate for achieving a variety of goal objects. Some families motivated by a high standard of living may engage in behavior which has a high probable utility for the accomplishment of a particular goal, e.g., a high level of material comfort.

Other families similarly motivated by a high standard of living may engage in behavior which has high probable utility for the attainment of a high level of material comfort, but fail to achieve this level because of various difficulties. For example, the diversion of family resources to take care of unexpected medical costs may prevent a family from acquiring the goods which would be reflected in a high level of living index for the family.

Still other families may engage in behavior which has low probable utility for the attainment of a high level of living, even though these families say they are motivated by a high standard of living. For example, instead of working to earn the money to acquire particular goods, the family head may go fishing. For such families other values may indeed be more motivating than a high standard of living.

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[6] Lowry Nelson, Rural Sociology (New York: American Book Co., 1955) pp. 301 ff.

Finally, some families may not value a high standard of living. The attainment of a particular level of living which normatively would be regarded as evidence of a higher or lower standard of living would, for such families, have to be regarded as coincidental rather than evidential. These families might have few or none of the attributes of the families with whom they share a particular level of living.

In the present study, an attempt has been made to portray the relationship between achievement and aspiration more adequately than could be done by simply measuring the family's level of living in terms of an index made up of a number of material goods. It was decided that such an index was a necessary component, but that it must be buttressed by other factors.[7] Intuitively, it seemed reasonable to construct a compound index made up of both a level of living measure and a measure of the standard of living and to control the factor of goal attainment difficulty. However, in order to avoid the problems associated with the validity and reliability of a measure of the standard of living as well as the problems of controlling goal attainment difficulty, it was decided to settle for a pattern approach which takes into account the family's financial resources as well as its level of living.

Patterns made up of the attributes family level of living and net family income were constructed. The total number of patterns which could be constructed from these attributes is a function of the number of classes into which each of the attributes is divided. If the level of living measure is divided into L classes and the income measure is divided into I classes, the total number of patterns which can be generated from these attributes is the product of L x I.

For this study net family income was divided into two classes and a level of living measure also was divided into two classes. Both attributes were divided as near to the medians of their respective distributions as possible. Hence, there are 2 x 2 = 4 level of living-net income patterns into which the families have been classified.[8]

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[7] See Appendix 3 for discussion of level of living index.

[8] A level of living score based on a 16-item index was available for all families. With respect to income, it was decided to assign 19 families who failed to provide any estimate of net family income to an income class on the basis of other characteristics. These indicated that six of the 19 families should be assigned to the category characterized by incomes of $1499 or less, and that 13 of the families should be assigned to the category having incomes of $1500 or more.

Table 1 presents the cross tabulation of the attribute net family income[9] with the attribute family level of living. A chi-square analysis of this distribution for one degree of freedom (d.f.), corrected for continuity, is 60.7 which is significant at a level of less than .001. This result was anticipated. The fact that the association is not perfect, however, provides support for the thesis that patterns derived from these two attributes are somewhat distinctive.

Table 1. NET FAMILY INCOME BY FAMILY LEVEL OF LIVING

Level of living class	Net income class		Total
	Low $1499 and below	High $1500 and above	
High 8-16 items	34	118	152
Low 0-7 items	98	46	144
Total	132	164	296

[9]The reader may be willing to accept the idea that a net family income of $1499 and below is rather low, but many question a figure of $1500 as an indication of a high income. The family income estimate was provided by the male family head. The average net family income for 247 of the 296 families who were willing to estimate their income to the nearest dollar is $2215. For this same group, the median income is $1670. That is, incidentally, appreciably lower than the median total family income of $2478 for all Southern white farm families in 1959. See Current Population Reports, Series P-60, No. 35, "Income of Families and Persons in the United States: 1959," p. 33. Thus high and low are relative terms and strictly applicable to this sample and the population it represents. Assuming the income estimates are valid, we may say that the typical family in this sample is financially less well off as compared to the typical Southern white farm family.

The Level of Living-Net Income Patterns as Adjustment Systems

The act of adjustment is necessarily an act of change--change presumably from a state which is considered "less adjusted" to a state which is considered "more adjusted." Adjustment on the part of an individual or group is variable, and it is related to various other factors which characterize the individual or group. The factors which are related may be considered to be a part of a logical "adjustment" network or system. Obviously, not all characteristics of the individual or group will be a part of this logical system at any given time. The relations in the system are basically relations of interdependence.[10] Some characteristics may appear to be a part of the network, but investigation may reveal that the relationship is spurious rather than real.[11]

Inasmuch as the system is dynamic, some characteristics may be a part of the system at time "A" but not at time "B." Other characteristics may be more or less important to the system at two different times even though the criterion of adjustment may remain constant or nearly so. Brawn may be more important than brains to getting ahead in one era, but quite the opposite is true in another era. Similarly, when the criterion of adjustment changes, characteristics which were related to the older criterion may not be related to the newer one.

ANALYSIS AND FINDINGS

Statistical Techniques Used

Two nonparametric techniques have been used to relate the four family patterns to various family characteristics. The chi-square technique has been used if the characteristic being related to the patterns can be classified only as a nominal characteristic. The Kruskal-Wallis "H" technique has been used if the variable being

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[10] See A. R. Radcliffe-Brown, A Natural Science of Society, Glencoe, Ill., The Free Press, 1957, for a discussion of system analysis on which the present formulation is partially based.

[11] See Herbert A. Simon, Models of Man, New York, John Wiley and Sons, Inc., 1957, pp. 41 ff. for an incisive discussion of the concept of "spuriousness."

related to the patterns can be considered an ordinal variable.[12] Appendix 2 includes the tables relating the several characteristics to the patterns as well as the statistical results.

Presenting the Analyses

In the following sections the relationships between the family categories comprised of level of living-net income are investigated with respect to a number of other family characteristics. For convenience in the analysis, these characteristics have been arbitrarily grouped into the following areas.

Background Characteristics

These include age of head and homemaker, education of head and homemaker, household size, number of children away from home, family life cycle, family occupational category, family illnesses, and social participation of the head and homemaker.

Farm Characteristics

These include size of farm operated, a measure of farm product change, a measure of farm land use change, a measure of farm practice adoption, and a measure of "agricultural extension" contact, i.e., with personnel and agencies who, for the most part, are associated with the Agricultural Extension Service.

Mobility Characteristics

These include the number of occupational and job changes of the head and the number of residential and geographical changes of the head and homemaker.

Attitude Characteristics

These include measures of the head's and homemaker's willingness for the head to take a nonfarm job and a measure of the head's satisfaction with the family's financial situation.

The analytic procedure used in the present study permits a comparison of the derived categories on each of the several background, farm, mobility, and attitude characteristics. Since the derived

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[12] See Sidney Seigel, Nonparametric Statistics for the Behavioral Sciences (New York: McGraw-Hill Book Co., 1956), for a description of the chi-square and "H" techniques and for the distinction between ordinal and nominal data.

categories are made up of two characteristics--income and level of living--which have frequently been used in sociological studies, it is possible to offer several a priori and empirical hypotheses concerning anticipated relationships. For example, many studies of rural social structure or rural social stratification indicate an inverse relationship between income and age or a direct relationship between level of living and social participation. We could, therefore, anticipate that low level of living-low income families would, on the average, be older than other families and that high level of living-high income families would, on the average, have a higher level of social participation than other families. Many such "hypotheses" might be offered. However, to do so would add little, if anything, to the study. Hypothesis testing, as such, is not a fundamental purpose of this study. Rather, a fundamental purpose is as stated in the preface, "to determine the relationship of selected. . .factors to the adjustment. . .of families. . ." We have posited the family categories as types of family adjustment systems. In this study we attempt to validate these systems by relating them to selected factors.

Level of Living-Net Income and Background Characteristics

In this section we examine the relationship of several background characteristics to the level of living-net income family patterns.

Age (Tables 2 and 3)

The age of the homemaker was found to be associated with the patterns at a significant level.[13] The highest average age for homemakers was found in the family pattern characterized by a high level of living-low net income. The lowest age was found associated with the homemakers in families characterized by a high level of living-high net income.

Although the age profiles by patterns for the male heads are somewhat similar to the homemakers, they are not sufficiently different to be significant at the .05 level.

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[13] In the table which shows this relationship--Table 2, Appendix 2--as well as other tables of this general form, one may observe a figure at the bottom of each level of living-net income category which is designated by the row labeled $\bar{X}$. This figure is simply the mean rank score for that category on the characteristic being portrayed. In the present example, the highest mean rank age, 188, reflecting the highest average age, is that of the high level of living-low net income homemakers. Similarly the lowest mean rank, 138, reflecting the lowest average age, is associated with the high level of living-high net income homemakers.

Abbreviations are used in Tables 2 through 24. LL = low level of living-low net income, LH = low level of living-high net income, HL = high level of living-low net income, and HH = high level of living-high net income.

Education (Tables 4 and 5)

The education of the head and the homemaker were both found to be significantly associated with the level of living-net income categories. For homemakers and male heads the highest average education is associated with the high level of living-high net income pattern. For homemakers as well as male heads, the lowest average education is associated with the low level of living-low net income pattern.

Household Size (Table 6)

The household size of the family was found to be significantly associated with the level of living-net income patterns. The households with the highest mean rank in terms of household composition are those which have a low level of living and a high net income. The households having the smallest mean rank are those with a high level of living and a low net income. It would seem plausible in these latter households that the families have been able to enjoy a high level of living despite a low net income for the reason that the income did not have to be divided up among as many family members. The larger sized households are those where the level of living is low while a high level of living tends to be associated with the smaller sized households.

Number of Children Away (Table 7)

The number of children away from home is a characteristic which is significantly associated with the level of living-net family income patterns. Families with a high level of living-low net income have the highest average number of children away from home. These are the families with the oldest heads and homemakers. Families with a high level of living-high net income have the fewest children away from home. These are the families with the youngest heads and homemakers. In view of the magnitude of this relationship, as contrasted with the magnitude of the age relationship, age would appear to be the more important characteristic.

Family Life Cycle (Table 8)

Families were classified into three family life stages on the basis of the age of the oldest child. Stage I families consist of those where all children are preschool. Stage II families consist of those where the oldest child is still of typical public school age, i.e., six to 18 years. Stage III families consist of those where the oldest child is beyond the usual public school age, i.e., 19 years of age or more. Families without children were classified in the appropriate stage on the basis of the modal age of the male head.

The level of living-net income patterns are significantly related to this classification of the family life cycle. The majority of the families in each level of living-net income pattern are Stage III families. However, in terms of the direction of association there are more Stage III families than expected in the patterns characterized by a high level of living-low net income as well as those characterized by a low level of living-low net income. The other two patterns have fewer Stage III families than expected. Also it is seen that there are more Stage II families than expected in both the high level of living-high net income and the low level of living-high net income patterns. The remaining patterns have fewer Stage II families than expected. All of the patterns, except that pattern characterized by a low level of living-low net income, have fewer Stage I families than expected.

Family Occupational Category (Tables 9, 10, and 11)

Whether the homemaker holds a job away from the home and whether the male head has a job in addition to operating a farm is significantly related to the level of living-net income patterns. In the two family patterns characterized respectively by a high level of living-high net income and low level of living-high net income, there are more cases than expected where the male head has a second job. The two family patterns characterized respectively by a low level of living-low net income and a high level of living-low net income have fewer cases than expected where the male head has a second job.

A somewhat similar relationship was found between the level of living-net income patterns and whether the wife has a job outside the home. The association is statistically significant. It is only in the pattern characterized by a high level of living-high net income, however, that the frequency observed of homemakers holding a job outside the home is greater than the frequency expected.

The association between the family occupational category and level of living-net income is illustrated when the comparison is made for all combinations of family occupational experience. The family categories which result are: no outside job; husband works on two jobs, i.e., farm and nonfarm; wife works outside home, i.e., housework and nonfarm job; and both husband and wife have two jobs. The relationship is significant, and the direction of association clearly reveals the economic importance of outside jobs in the family. The majority of the families classified in the high income categories have one or more family heads each working on two jobs--that is, farming and a second job, or homemaking and a second job.

Number of Family Illnesses (Table 12)

The health of the family has many implications for its level of living as well as its income. Homemakers in the sample were asked to indicate the number of partially or fully disabling illnesses characterizing their families. The majority of these families indicated no such disabling illness. One hundred sixty-three families fell into this group. Sixty-four families indicated one illness. Thirty-seven families indicated two illnesses. Thirteen families indicated three illnesses and another 13 families mentioned four such illnesses. Four families indicated five illnesses each. One family indicated six illnesses and one family indicated seven illnesses.

The number of illnesses was found to be significantly related to the level of living-net income family patterns. The highest number of illnesses is associated with the low level of living-low net income families. The lowest number of illnesses is found to be associated with the high level of living-high net income families. The families characterized by a high level of living and a low net income were found to have the second highest average number of illnesses. However, given the fact that these are old families helps to explain the high incidence of illness. Similarly, the younger families were found to have the fewest illnesses.

Social Participation (Tables 13 and 14)

The interaction of the individual with the institutions of his community has frequently been found to be related to various characteristics of the individual.

The male heads and the homemakers in each family were classified according to their participation in organizations in their communities. Membership in an organization was accepted as a criterion of participation. For nonmembers attendance at 1/4 or more of the meetings was the criterion. The following categories were established: (1) no participation, (2) participation in church only, (3) participation in church and other organization(s), (4) participation in other organization(s) only. Very few respondents were categorized in category 4 so this category was combined with category 3 for analytical purposes.

Participation is significantly associated with the level of living-net income family patterns for both the homemakers and the male heads.

An examination of the tables reveals that both homemakers and male heads who are in high level of living-high net income families are members or participate, at a level greater than expected, in the church

plus other organizations. Male heads and homemakers in low level of living families, irrespective of family income, tend to be found in greater than expected numbers in the church only or in no organizations. A greater than expected frequency of participation is found also for homemakers, but not for male heads, in families categorized as having a high level of living and a low net income.

Level of Living-Net Income and Farm Characteristics

In this section we examine the relationship of various farm characteristics to the level of living-net income patterns.

Size of Farm (Table 15)

The size of the farm was not significantly related to the level of living-net income classification. Evidently the sheer size of the farm has little to do with the scale of farming operations. Undoubtedly a better measure of this would be the number of acres of cropland, holding total size constant.

Farm Product Change (Table 16)

It was reasoned that farmers may adjust to changing economic and agricultural conditions by making changes in their farm production patterns. The changes might be either increments or decrements of particular products in order to meet the changing demands. It was practicable to classify the farms into three categories according to changes over the five years prior to the survey. These consisted of 143 farms which had made no changes, 100 farms which had made one change and 53 farms which had made two or more product changes.

There is a significant relationship between the level of living-net income family categories and the number of changes. Families which had the fewest product changes were found to have a low level of living-high net income. This perhaps reflects the stability in farming operations associated with the age of these families. Families which had the most changes were found to have a high level of living-high net income. The greater change on the part of these latter families is believed to reflect their greater and more successful adaptability to changing conditions in agriculture.

Farm Land Use Change (Table 17)

An indication of awareness of changing conditions in agriculture may be reflected in the changes which are made in land use on farms.

Questions were asked of all male respondents to determine any changes which had been made in pastureland, cropland, improved forests, and farm ponds during the previous five years. Approximately a third of the farms, 103, had made no changes, another group of 103 had made one change, and the remaining 90 farms had made two or more changes. A farm land use change score ranging from zero changes to five changes was constructed and related to the level of living-net income categories. The relationship was found to be significant. The highest change is associated with the high level of living-high net income category and the lowest change is associated with the low level of living-low net income category. The nature of the association would appear to reflect the differential adaptability of the various family categories to changing conditions in agriculture.

Farm Practice (Table 18)

An arbitrary score ranging from 0-9 was constructed based upon responses of the 296 male respondents as to whether they had adopted certain "recommended" practices during their farming careers. The "recommended" practices included such things as the planting of certain varieties of corn, grain, and grasses; the use of soil testing, herbicides and insecticides; and the adoption of other "recommended" farm practices including systematic record keeping and soil erosion controls. The recommended farm practices were gleaned for the most part from existing extension publications and from discussions with personnel in extension work.

The Farm Practice index is significantly associated with the level of living-net income family categories. The highest mean rank practice score is found in the high level of living-high net income category. The lowest mean rank is associated with the low level of living-low net income category. The next to highest mean rank is found in the high level of living-low net income category and this is followed closely by the rank of those families classified in the low level of living-high net income category.

Extension Contact (Table 19)

All male respondents were asked seven questions dealing with their relationship to the Extension Service. These questions dealt with visits by the respondent to the County Agent's office, visits by the agent or his representatives to the respondent's farm, attendance at meetings conducted by the extension staff, discussions with vocational agriculture teachers, and visits by the respondent to farm demonstrations.

An arbitrary score ranging from 0-7 was constructed from the response to these extension contact items and was related to the level of living-net income categories.

The relationship was found to be significant. The families with the highest level of living-net income were found to have the most contact. The families with the low level of living-high net income were found to have the least contact. It would appear that extension contact and level of living are more closely associated than income and extension contact. There is very little difference in the mean rank contact for the two high level of living categories and there is little difference in mean rank contact for the two low level of living categories.

Level of Living-Net Income and Mobility

In this section we examine the relationship of some mobility measures to the level of living-net income patterns.

Occupational and Job Changes (Table 20)

One of the many ways in which individuals attempt to meet economic, social and psychological needs is through occupational change. Questions were asked of all male respondents to determine if changes had been made in the main job or the second job during the five-year period preceding the survey, the number of different employers for whom the respondent had worked during the five-year period, and whether or not the respondent had changed his actual main occupation, as opposed to changing a job within the same occupation, during the five-year period.

An arbitrary index was constructed from this information with a range of 0-4. A total of 110 people had made no changes; 81 people had made one change; and 105 people had made two or more changes. This measure is not significantly related to the level of living-net income categories.

An examination of Table 20 indicates that the number of changes is quite uniform for three of the categories and that only the high level of living-low income family category appeared to be characterized by relatively fewer job changes. Consequently, a fourfold table was derived combining the three apparently uniform categories versus the high level of living-low income category and the zero occupational change versus one or more such changes. A chi-square test of this relationship is significant.

Undoubtedly, this finding tends to point up the fact that the high level of living-low income category is made up, for the most part, of older and relatively stable families. At an earlier point in time, these families might have been classified as being high income-high level of living. At the time of the survey, many of these families were retired or partially retired and thus not particularly active in the labor market.

Despite the fact that there is quantitatively little difference between the number of occupational changes characterizing three of the categories, one might speculate that there have been qualitative differences in the nature of the occupational changes between the three categories. That is, among the low level of living-low income families the changes might well reflect an occupational instability associated with, for example, low education and low skill level. On the other hand, among the high level of living-high income families the nature of the occupational changes might well reflect improvements in their occupational situations.

Residential and Geographical Changes (Table 21)

An arbitrary index reflecting residential and geographical change was constructed from four items asked of all male respondents. These items had to do with the number of changes of residences within the county, the number of different counties in North Carolina in which the respondent had worked or lived for at least three months, the number of different states besides North Carolina in which the respondent had lived or worked for at least three months, and the number of different states besides North Carolina in which the respondent had visited for a period of at least two weeks.

In 21 cases, no residential or geographical change took place. A total of 69 individuals had made one change. An additional 88 respondents indicated two changes. Ninety-four individuals had made three changes. Twenty-four individuals had made four changes.

This index was significantly related to the level of living-net income categories. The highest mean rank is associated with the high level of living-high income category while the lowest mean rank is associated with the low level of living-high income grouping. Actually, the extent of change between three of the categories is relatively low and quite similar, while the extent of change among the high level of living-high income group is relatively high. These latter individuals, as contrasted with the other male respondents, show more travel to other states in connection with working and visiting. Whether this comes about as a result of their higher socioeconomic status or whether their traveling is a contributing factor to this status is a debatable point.

Level of Living-Net Income and Attitudes

In this section we examine the relationship of some attitude measures and the level of living-net income patterns.

Willingness to Take Nonfarm Job (Tables 22 and 23)

The husbands and wives were asked to respond to six items intended to determine their willingness to have the male head of the family take a nonfarm job at an increase of half again as much income but under various conditions including moving to a large city, being away from home frequently, and moving residences every two or three years. A scalogram analysis of responses to these items indicated the presence of a scale with a coefficient of reproducibility of 91.3 percent.[14]

The scale for the male heads is significantly related to level of living-net income categories. The individuals with a low level of living-low net income indicated the greatest willingness to take a nonfarm job. The individuals with a high level of living-low net income, on the other hand, indicated the least willingness to take a nonfarm job.

Again we see, in terms of the latter category, the effects of age and stability. On the other hand, family heads in the lowest category evidenced less attitudinal reluctance to take measures which might result in an improved economic status.

One of the items making up the scale discussed immediately above is worded "Would you be willing to move your family out of this county for you to accept (for your husband to accept) a job which would increase your income half again as much as now?"

A total of 116 men replied "yes" to the query and 62 men responded "no." Eighteen persons were undecided. The male head responses to this item were dichotomized into two groups--"yes" and "other." This distribution was related to the level of living-net income categories and a chi-square test was computed. The result is statistically significant. This result, of course, is in line with the result of the immediately preceding analysis. The family heads who are most willing to move are represented to an extent greater than expected by chance in the low income-low level of living families.

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[14] For the scale technique used see S. Stouffer, et al., Measurement and Prediction. Princeton, Princeton University Press, 1950.

Family Financial Satisfaction (Table 24)

All male heads were asked, "Would you consider your family's financial situation as being satisfactory? A total of 212 replied "yes" to this question and 84 gave some other response, usually "no." This dichotomy was related to the level of living-net income categories and a chi-square test was computed. The result is significant.

It is interesting to note that the majority of family heads in each family category expressed satisfaction with their financial situation. However, there is appreciably more satisfaction in the high level of living-high net income group than in the low level of living-low net income group. In the former category the majority is about three to one. In the latter category the majority is approximately three to two.

One might reasonably expect to find more satisfaction with the family financial situation among those families enjoying a higher socioeconomic status than among those who are not so fortunate. On the other hand, it is somewhat surprising to learn that so many of those with a relatively low status would express satisfaction with their family's financial situation. Since many of these families reside on "subsistence" type farms, it is plausible that some of the expressed satisfaction is related to nonmonetary sources of income, e.g., vegetable gardens. Following this line of reasoning, one would expect to find many of these family representatives expressing less satisfaction if they were in an economy based more on money than on subsistence, i.e., in a typical urban setting. Of course, it may also be plausible to reason that a major factor explaining why so many of these families occupy a lower socioeconomic position is that they are indeed satisfied with a minimum financial condition.

SUMMARY AND CONCLUSIONS

The results of this study suggest a "typical" composite family. The typical husband and wife are middle aged parents of three children, at least one of whom is in his late teens or older, and who is living away from home. The typical family operates a small farm which is the principal source of the small family income, if not the only source. It is likely that the husband is operating land that has been passed on to him from his father, and the mobility of the marital pair is such that it is likely they have known one another since early childhood. At least their social heritage is shared in common and perhaps the relative lack of geographical mobility which characterizes the parents, coupled with the fact that neither of them has gone beyond

the seventh grade, fosters a kind of provincialism and value system characterized by high satisfaction with the status quo. This is unquestionably reinforced by their coming in contact largely with people like themselves whose main extrafamilial social activity is the church.

The analytical part of this report has dealt with an examination of four patterns formed by the conjunction of a measure of family level of living and the male head's estimate of the net family income. The measures of level of living and net family income were each divided as close to the median as possible and combining these two level of living classes and two income classes yielded four classes of families: low level of living-low income, high level of living-low income, low level of living-high income and high level of living-high income.

It was reasoned that these patterns reflected differential patterns of adjustment. These patterns take into account the resources of the families and their utilization of these resources. It was argued that this utilization is a function of a number of dynamic forces including: family attitudes--which presumably reflect something of the family's value system; family needs--which presumably reflect something about the family's "objective" need situation as well as its values with respect to these needs; and family capabilities--which presumably reflect something of the family's ability to use its resources.

Two statistical techniques, the Kruskal-Wallis H test and the chi-square test, were used to determine whether these patterns are associated with other family characteristics. The following background characteristics were believed to be important with respect to the differential adjustment patterns: age of homemaker, age of male head, education of homemaker, education of male head, size of household, number of children away from home, family life cycle, family occupational category, and the social participation of homemakers and male heads.

The following farm characteristics were also believed to have some bearing on the differential patterns: size of farm, the extent of farm product change, the extent of farm use change, the adoption of recommended farm practices, and the amount of contact with the Extension Service.

The extent of mobility of the samples was also considered to be an important factor in adjustment and the following mobility indices were related to the patterns: occupational and job change of the male head, the residential change of the male head, and the geographical mobility of the male head.

It was reasoned that patterns of adjustment might well be characterized by different attitudes. Six items dealing with attitudes toward taking a nonfarm job formed a hypothesized scalogram. The male head scale types were related to the family patterns.

Finally, it was argued that these several characteristics combine into larger patterns which may be considered adjustment systems. In the following paragraphs these family systems are discussed in terms of the study findings.

Low Level of Living-Low Net Income Families

A total of 98 families share this pattern designation. An examination of the various analyses indicated that the heads of these families are somewhat older and more poorly educated than in the case of the typical family. They rank next to highest in the average age of the male head and homemaker and the heads have the lowest education of any of the categories. The average household size of these families is next to highest and these low level of living-low income families also have next to the highest average number of children living away from home--a further indication of the larger size of the families in this category.

Families in this category have proportionately fewer heads bringing in supplementary incomes from second jobs than is typical for the sample as a whole. This finding presumably is not unrelated to the age and education characteristics associated with low level of living-low net income families.

The extent of contact with organizations is clearly more restricted for these families than is typically the case. The heads either participate in the church only or do not have any association with formal organizations.

These families rank next to lowest in the size of farm operated. They rank low in terms of changes and activities which could improve their farming situations and homelife. They rank lowest in the adoption of recommended farm practices and in farm land use change. These families have not been particularly prone to changes in their geographical locations, but it is noteworthy that the male heads of these families have experienced relatively more occupational mobility than the average. This higher mobility may reflect the greater lack of ability of these families to have a stable occupational situation.

This relatively higher occupational mobility also may be reflected in certain attitudes. For example, the male heads of these families have the highest average rank, i.e., greatest amount in favor, with respect to taking a nonfarm job. That this favorable attitude has not

been translated into action, however, is evident in terms of the relatively fewer representatives of these families who have a second job.

Low Level of Living-High Net Income Families

Forty-six families were classified into this category. These families are relatively young as evidenced by the next to lowest average age of the male heads and homemakers. However, they rank low in education, having the next to lowest rank for the family heads above the low level of living-low net income families.

The families in this category are relatively large. They rank highest in terms of the size of the household and they rank next to lowest in the number of children away from home. Consequently, these families have to spread their higher incomes among relatively more individuals than the typical family in this study. This fact perhaps helps to account for their relatively low level of living. As expected there are relatively more of these families who have children in a preschool or school status than in the typical family studied.

In nearly half of these families, 20 of 46, the male head reported a second job, but very few of the homemakers were found to be working away from the home.

These families have relatively few illnesses. They have the lowest average rank in this respect. This finding apparently reflects the relative youth of the families.

These families are characterized by limited contact with community organizations except for the church.

Families in this category rank highest in terms of the size of the farms operated. The families in this category apparently accept change quite readily. This category ranks next to highest in the number of farm product changes and also next to highest in the number of changes made in the use of land. The rank order of adoption of farm practices is next to the lowest, but it is necessary to point out that the differences in the average ranks between the three highest groups are slight. These families are characterized by selectivity of change rather than by lack of change. They rank lowest of all categories in terms of contact with the agencies of change as evidenced by their extension contact scores.

These families are characterized by relatively low occupational mobility, ranking next to lowest on this index and they have the lowest geographical mobility of all family categories.

The extent to which male heads in these families are working in second jobs is apparently reflected in the favorable attitude they have toward taking a nonfarm job. Male heads in this category are relatively satisfied with family finances.

High Level of Living-Low Net Income Families

Families which have been classified into this category total 34 in number. These are the oldest families in the sample as evidenced by the fact that the male heads and homemakers rank highest in age. Other associated factors point to the maturity of these families. They rank lowest in terms of the size of the household and highest in terms of the number of children away from home. The vast majority of these families are in the later stages of the family life cycle. For the most part their children are in the school or, more frequently, in the postschool age bracket.

Husbands and wives in these families rank next to highest in the amount of education. This fact is probably related to their acquiring the goods which are reflected in their higher level of living.

In two out of three of these families neither the husband nor the wife maintains a second job. This means that for the most part these families must rely on their farms or nominal sources for their money income.

These families rank next to highest in the number of family illnesses. A total of 33 illnesses was reported by these families, although 20 of the families reported no illnesses. These families reporting illnesses evidently have managed to accrue the goods which account for their high level of living prior to their being stricken by illnesses which they consider to be serious.

All of the homemakers in these families and about six out of every seven male heads reported contact with some community activity. While 22 of the homemakers and 16 of the male heads take part in church activities only, it is noteworthy that 12 of the homemakers and 13 of the male heads participate in one or more formal organizations in addition to their church. These relatively higher rates of social participation testify to the interest of these families in their community.

These families rank lowest in terms of the size of the farms which they operate--a fact apparently not unrelated to their low incomes. They rank lowest also in terms of the number of occupational changes and in the number of changes they have made in farm products. They rank next to lowest in terms of the changes they have made in the use of their farm land.

On the other hand, these families are not strangers to change. They rank next to highest in terms of the adoption of recommended farm practices and they have next to the highest mean rank in terms of extension contact. These families have been somewhat more geographically mobile than have the families in two of the categories although not to any appreciable extent.

The male heads in these families rank lowest of all in the husband's willingness to take a nonfarm job, so attitude as well as advanced age and, perhaps, illness would appear to contribute to the fact that few of these families have second jobs. Despite the low incomes which characterize these families, approximately three of every four male heads expressed satisfaction with the state of their family finances.

High Level of Living-High Net Income Families

This category includes 118 families--the highest number of any category. That these families are relatively young is evidenced by the facts that the homemakers in these families have the lowest rank in age and the male heads rank next to the lowest. These families rank next to lowest in the size of the household. Thus, the money income is shared by fewer people--a fact which probably explains their having more material goods. These families rank lowest in the number of children away from home--a further indication of the relative youth of these families. Considerably more of these families than expected by chance are in the earlier stages of the family life cycle and are thereby characterized by larger numbers of preschool and school age children than on the average.

The male heads and homemakers rank highest in terms of the amount of education. The comparative mean rank differences between family categories in the case of education are striking. This higher degree of formal education undoubtedly helps to account for the high level of living and the high net income of these families in many ways. For example, it is no doubt a factor in accounting for the finding that in 77 of the 118 families either the husband, the wife, or both have a second job which provides an additional cash income.

These families have relatively few illnesses, ranking lowest in this category. These families have a high rate of participation in formal organizations. It is the mode for both husbands and wives to participate in the church and other organizations as well.

These families rank next to highest in the size of the farm operated. They show considerable evidence of being innovators on these farms as evidenced by the fact that they rank highest in the number of farm product changes, in the changes which whey have made in the use of farm land, and in the adoption of farm practices.

These families are characterized by the highest rank in terms of extension contact.

It is noteworthy that these families also rank highest in terms of the number of occupational changes and in terms of the amount of geographical mobility.

The male heads in this sample rank next to lowest in their willingness to take a nonfarm job. Actually, in more than half of these families the husbands already have a second job and perhaps the remaining husbands feel too involved with their farms to consider another job. Since some items in this scale deal with moving away from the community to take a nonfarm job and since these families are relatively well adjusted in their present communities, it is perhaps not surprising that they would rank lower on this scale than those in some of the categories. Only 40 of the 118 male heads, about one out of every three, in this category expressed a willingness to move from the county to accept a job.

Finally, male heads in these families express satisfaction with their family finances to a slightly greater extent than in any of the other categories. For the sample as a whole 212 out of 296, or 71.6 percent, express satisfaction with family finances. In the high level of living-high net income category 91 out of 118, or 77.1 percent, express such satisfaction.

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While the patterns undoubtedly require more refinement if they are to be used analytically in further studies, it is clear that these patterns have been validated to a considerable degree in the present analysis. Each pattern has been uniquely characterized. While the categories at either end of the typology are more distinctive, it would appear that the families characterized by low net income-high level of living and high net income-low level of living are sufficiently distinctive from an analytical standpoint to be treated differentially.

In programs designed for these developing rural areas, program planners will be better advised if they are aware of these potential differential ways of adjustment, and of the reasons for the differences--some of which have been suggested in this study.

APPENDIX 1

The Sample

The area probability sample for this project was formulated by the Department of Experimental Statistics, North Carolina State College.

A sample size of approximately 300 farm operator residences was desired. The eligibility for becoming a part of the sample was confined to those farm operator households in the open country of Watauga County characterized by the following: (1) the farm operated by the household residents met the 1959 census criteria for a farm at any time between 1954 and 1959; and (2) the household was occupied by the farm operator and his wife.

Sampling units were set up on the basis of approximately twenty 1954 census farms to a sampling unit. Due to the discrepancy between the 1954 and 1959 Census of Agriculture and the restriction that a household must contain a husband and a wife, it was decided that 20 units of 20 farms each should be drawn. This many units, based on only 1954 expectations, should have yielded 400 farms.

Twenty sample units were randomly drawn and every farm household within each segment was screened to determine whether it met the sample criteria. A total of 315 households were found which satisfied the criteria. Schedules were completed on 296 of these 315 households.

The data were collected by means of personal visits to the sampled households. Male heads and homemakers were interviewed.

APPENDIX 2

Table 2. HOMEMAKER AGE BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

Age	Mean rank	Number	LL	LH	HL	HH
19 and under	2.5	4	2	1	0	1
20 - 29	23.0	37	13	4	1	19
30 - 39	72.0	61	18	13	5	25
40 - 49	139.5	74	22	13	8	31
50 - 59	204.0	55	20	7	6	22
60 - 69	259.5	56	18	7	13	18
70 - 79	290.0	5	3	1	-	1
80 and over	294.5	4	2	-	1	1
Total		296	98	46	34	118
$\bar{X}$			152	139	188	138

$H = 9.69$, d.f. = 3, $p < .05$

Table 3. MALE HEAD AGE BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

Age	Mean rank	Number	LL	LH	HL	HH
20 - 29	13.0	25	14	2	1	8
30 - 39	53.5	56	14	10	3	29
40 - 49	113.5	64	15	16	8	25
50 - 59	178.0	65	27	7	6	25
60 - 69	241.5	62	19	6	11	26
70 - 79	283.0	21	7	5	5	4
80 and over	295.0	3	2	-	-	1
Total		296	98	46	34	118
$\bar{X}$			149	141	183	141

H = 6.75, d.f. = 3, $p > .05$

Table 4. HOMEMAKER EDUCATION BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

Grade completed	Mean rank	Number	LL	LH	HL	HH
None	3.0	5	5	-	-	-
1 - 4 grades	13.0	20	11	4	3	2
5 - 7 grades	78.5	106	51	21	13	21
8 grades	149.5	36	14	7	2	13
9 - 11 grades	205.0	75	13	10	10	42
12 grades	256.5	28	4	3	3	18
1 - 3 years college	278.5	16	-	1	3	12
4 years college	290.5	8	-	-	-	8
Post grad. college	295.5	2	-	-	-	2
Total		296	98	46	34	118
$\bar{X}$			101	127	147	196

$H = 66.43$, d.f. = 3, $p < .05$

Table 5. MALE HEAD EDUCATION BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

Grade completed	Mean rank	Number	LL	LH	HL	HH
None	5.0	9	6	-	1	2
1 - 4 grades	41.0	63	32	18	7	6
5 - 7 grades	128.0	111	43	18	11	39
8 grades	201.5	36	6	6	6	18
9 - 11 grades	242.0	45	8	4	3	30
12 grades	274.0	19	3	-	5	11
1 - 3 years college	287.5	8	-	-	1	7
4 years college	293.0	3	-	-	-	3
Post grad. college	295.5	2	-	-	-	2
Total		296	98	46	34	118
$\bar{X}$			110	113	156	192

$H = 30.12$, d.f. = 3, $p < .05$

Table 6. HOUSEHOLD SIZE BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

No. of persons	Mean rank	Number	LL	LH	HL	HH
Two persons	40.5	80	25	7	12	36
Three persons	113.0	65	22	8	10	25
Four persons	173.0	55	13	9	3	30
Five persons	219.0	37	12	8	5	12
Six persons	251.5	28	12	7	-	9
Seven persons	270.5	10	4	1	3	2
Eight persons	282.0	13	8	3	-	2
Nine persons and over	292.5	8	2	3	1	2
Total		296	98	46	34	118
$\bar{X}$			156	179	127	136

$H = 11.30$, d.f. = 3, $p < .05$

Table 7. NUMBER OF CHILDREN AWAY BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

No. of children away	Mean rank	Number	LL	LH	HL	HH
None	67.0	133	41	21	12	59
One	151.0	35	7	5	5	18
Two	184.5	32	8	8	1	15
Three	215.0	29	13	4	2	10
Four	237.5	16	6	2	4	4
Five	255.5	20	8	3	2	7
Six	271.0	11	5	2	4	-
Seven	280.5	8	4	-	2	2
Eight	287.0	5	2	-	1	2
Nine or more	293.0	7	4	1	1	1
Total		296	98	46	34	118
$\bar{X}$			161	143	172	134

H = 8.50, d.f. = 3, $p < .05$

Table 8. FAMILY LIFE CYCLE BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

Life cycle	LL	LH	HL	HH	Total
I*	16	3	3	9	31
II**	18	14	4	38	74
III***	64	29	27	71	191
Total	98	46	34	118	296

$X^2 = 13.48$, d.f. = 6, $p < .05$

*Young or middle age families with preschool age children.

**Young or middle age families with preschool and school age children.

***Middle or old age families with school and postschool age children.

Table 9. HUSBAND'S OCCUPATION CATEGORY BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

Husband's occupation category	LL	LH	HL	HH	Total
No second job	73	23	29	56	181
Second job	25	23	5	62	115
Total	98	46	34	118	296

$X^2 = 27.44$, d.f. = 3, $p < .05$

Table 10. WIFE'S OCCUPATION CATEGORY BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

Wife's occupation category	LL	LH	HL	HH	Total
Homemaking only	92	40	29	83	244
Homemaking and outside job	6	6	5	35	52
Total	98	46	34	118	296

$X^2 = 21.69$, d.f. = 3, $p < .05$

Table 11. FAMILY OCCUPATION CATEGORY BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

Family occupation category	LL	LH	HL	HH	Total
Wife works	4	3	5	15	27
Husbands works	23	20	5	42	90
Husband and wife work	2	3	0	20	25
No outside job	69	20	24	41	154
Total	98	46	34	118	296

$X^2 = 47.93$, d.f. = 9, $p < .05$

Table 12. NUMBER OF ILLNESSES BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

No. of illnesses	Mean rank	Number	LL	LH	HL	HH
None	82.0	163	37	30	20	76
One	195.5	64	26	10	2	26
Two	246.0	37	18	1	7	11
Three	271.0	13	7	2	3	1
Four	284.0	13	6	3	2	2
Five	292.5	4	2	-	-	2
Six	295.0	1	1	-	-	-
Seven or more	296.0	1	1	-	-	-
Total		296	98	46	34	118
$\bar{X}$			177	132	151	131

$H = 17.49$, d.f. = 3, $p < .05$

Table 13. HOMEMAKER TYPE OF PARTICIPATION BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

Type of participation	LL	LH	HL	HH	Total
None	5	3	0	1	9
Church only	78	27	22	52	179
Church and other + other only	15	16	12	65	108
Total	98	46	34	118	296

$X^2 = 40.46$, d.f. = 6, $p < .05$

Table 14. MALE HEAD TYPE OF PARTICIPATION BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

Type of participation	LL	LH	HL	HH	Total
None	16	8	5	6	35
Church only	61	29	16	53	159
Church and other + other only	21	9	13	59	102
Total	98	46	34	118	296

$X^2 = 28.15$, d.f. = 6, $p < .05$

Table 15. SIZE OF FARM BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

No. of acres	Mean rank	Number	LL	LH	HL	HH
Less than 10 acres	15.5	30	10	1	4	15
10 - 19 acres	52.0	43	16	7	6	14
20 - 29 acres	90.5	34	13	2	4	15
30 - 49 acres	139.5	64	25	13	7	19
50 - 69 acres	191.0	39	12	7	5	15
70 - 99 acres	225.0	29	8	5	1	15
100 - 139 acres	246.0	13	2	4	1	6
140 - 219 acres	263.0	21	5	5	3	8
220 - 499 acres	275.0	3	-	-	-	3
500 acres and up	286.5	2	1	-	-	1
Total		278*	92	44	31	111
$\bar{X}$			129	162	127	143

$H = 6.22$, d.f. = 3, $p > .05$

*Sixteen of the families did not have a farm at the time of the survey, and the size of farm for two families was not obtained.

Table 16. FARM PRODUCT CHANGES BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

No. of changes	Mean rank	Number	LL	LH	HL	HH
None	72.0	143	59	21	22	41
One	193.5	100	27	16	9	48
Two - four	270.0	53	12	9	3	29
Total		296	98	46	34	118
$\bar{X}$			130	153	122	170

$H = 15.68$, d.f. = 3, $p < .05$

Table 17. FARM LAND USE CHANGES BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

No. of changes	Mean rank	Number	LL	LH	HL	HH
None	52.0	103	46	14	10	33
One	155.0	103	30	16	14	43
Two	231.5	50	12	7	8	23
Three	269.0	25	9	5	1	10
Four and five	289.0	15	1	4	1	9
Total		296	98	46	34	118
$\bar{X}$			128	159	150	161

$H = 8.95$, d.f. = 3, $p < .05$

Table 18. FARM PRACTICE SCORE BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

Index score	Mean rank	Number	LL	LH	HL	HH
0	13.5	26	14	2	3	7
1	46.0	39	24	5	2	8
2	89.5	48	17	6	8	17
3	136.0	45	13	11	2	19
4	180.5	44	12	8	7	17
5	218.5	32	6	7	4	15
6	248.0	27	9	4	2	12
7	270.0	17	2	1	2	12
8	284.0	11	1	-	1	9
9	293.0	7	-	2	3	2
Total		296	98	46	34	118
$\bar{X}$			113	155	161	172

$H = 26.86$, d.f. = 3, $p < .05$

Table 19. EXTENSION CONTACT SCORE BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

No. of contacts	Mean rank	Number	LL	LH	HL	HH
None	37.0	73	33	16	4	20
One	102.5	58	22	14	8	14
Two	157.5	52	19	4	7	22
Three	201.5	36	10	5	3	18
Four	231.5	24	6	5	1	12
Five	255.5	24	4	1	5	14
Six	275.0	15	4	1	1	9
Seven or more	289.5	14	-	-	5	9
Total		296	98	46	34	118
$\bar{X}$			122	116	174	175

$H = 30.25$, d.f. = 3, $p < .05$

Table 20. OCCUPATIONAL CHANGES BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

No. of changes	Mean rank	Number	LL	LH	HL	HH
0	55.5	110	37	18	19	36
1	151.0	81	24	12	7	38
2	213.0	43	16	7	3	17
3	250.0	31	8	4	3	16
4	281.0	31	13	5	2	11
Total		296	98	46	34	118
X			150	146	119	156

H = 4.99, d.f. = 3, $p > .05$

Table 21. MOBILITY INDEX BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

Index score	Mean rank	Number	LL	LH	HL	HH
0	11.0	21	11	3	1	6
1	56.0	69	24	16	9	20
2	134.5	88	31	13	14	30
3	225.5	94	25	11	8	50
4	284.5	24	7	3	2	12
Total		296	98	46	34	118
$\bar{X}$			135	131	140	169

H = 11.21, d.f. = 3, $p < .05$

Table 22. HUSBAND'S WILLINGNESS TO TAKE NONFARM JOB BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

Scale score	Mean rank	Number	LL	LH	HL	HH
0	70.5	140	40	18	22	60
1	157.5	34	10	7	2	15
2	200.5	52	15	9	5	23
3	239.5	26	11	6	3	6
4	257.5	10	6	1	-	3
5	269.0	13	4	3	-	6
6	286.0	21	12	2	2	5
Total		296	98	46	34	118
$\bar{X}$			164	158	122	139

$H = 8.30$, d.f. = 3, $p < .05$

Table 23. WILLINGNESS TO MOVE FAMILY OUT OF COUNTY TO ACCEPT JOB BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

Willingness to move	LL	LH	HL	HH	Total
No and other	49	26	27	78	180
Yes	49	20	7	40	116
Total	98	46	34	118	296

$X^2 = 11.49$, d.f. = 3, $p < .05$

Table 24. SATISFACTION WITH FAMILY FINANCES BY FOUR LEVEL OF LIVING-NET INCOME CATEGORIES

Satisfaction with family finances	LL	LH	HL	HH	Total
Other than satisfied	38	11	8	27	84
Satisfied	60	35	26	91	212
Total	98	46	34	118	296

$X^2 = 7.83$, d.f. = 3, $p < .05$

APPENDIX 3

Level of Living Index

A measure of level of living was judged to be central to carrying out the objectives of the project of which the present study is a part.

The homemakers in the sampled families were asked a number of questions concerning family possessions and the state of the house and its furnishings. These items, many of which were taken from existing level of living measures, were assumed to reflect level of living.

The items which were selected to form the initial level of living index are listed in Table 25. The starred items are those which were selected for the final index.

Item Selection and Index Reliability

The items were limited to those within the range possessed by no fewer than 15 percent of the families nor more than 85 percent. It was reasoned that items falling outside this range would not sufficiently differentiate families. There were originally 19 items satisfying this criterion. However, two of the items, flush toilet and tub or shower, had identical possess percentages, i.e., 40 percent. It was decided to use only one of these items since a cross tabulation indicated these two items to be highly intercorrelated. The possession of a tub or shower was arbitrarily chosen for the initial trial.

Accordingly 18 items were assigned scores--a "1" for possession and a "0" for nonpossession. These scores were summed and a total score was assigned to each family on the basis of the total number of 1's. The score distribution was divided into an upper and lower score group and these groups were cross tabulated with each of the items comprising the trial scale. A phi coefficient was used to select items. Actually, an abac provided by Guilford[1] was used to determine the phi coefficient on each of the fold tables. This was done by comparing the proportion of families in the high group with a "1" on each item with the proportion of families in the low group with a "1" on each item. Two of the 18 items were rejected on the basis of their lack of significant association with the criterion groups.

The remaining 16 items were designated to comprise the second trial scale. New scores based on these 16 items were computed and high and low

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[1] J. P. Guilford, Fundamental Statistics in Psychology and Education, 2nd Edition, (New York: McGraw-Hill Book Co., 1950), p. 503.

Table 25. BATTERY OF ITEMS SELECTED TO FORM LEVEL OF LIVING INDEX

Item	Scorable response	Number of families	Percent
*House construction	Complete	197	67
*Clothing closets	1 or more	218	74
*Bathroom	Yes	123	42
*Dining room or space	Yes	162	55
Piped running water	Yes	219	74
*Electric or gas range	Yes	150	51
*Separate home freezer	Yes	60	20
*Electric, gas or kerosene water heater	Yes	104	35
*Sewing machine	Yes	241	81
*Electric vacuum cleaner	Yes	118	40
*Record player	Yes	90	30
*Television set	Yes	183	62
*Kitchen sink	Yes	231[a]	78
Tub or shower	Yes	118	40
*Telephone	Yes	79	27
*Automobile or truck	Yes	232	78
*Pressure cooker	Yes	178	60
*Central or space heating	Yes	43	15

*Items comprising final index

[a]Twenty sinks without running water

criterion groups were again selected. Again each item was cross tabulated with the upper and lower groups and the phi coefficient was again used. Each of the 16 items was found to be significantly related at or beyond the .05 level. Each of the items, in other words, differentiates between the criterion groups.

The distribution of families in this 16-item index is shown in Table 26. The Kuder-Richardson estimate of reliability for this index is .912, an appreciable measure of the internal consistency of this index.[2]

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[2] Ibid., p. 495.

Table 26. FREQUENCY OF FAMILIES IN EACH SCORE CATEGORY OF SIXTEEN-ITEM LEVEL OF LIVING INDEX

Score category	Frequency
16	5
15	14
14	17
13	14
12	18
11	17
10	26
9	22
8	19
7	28
6	35
5	20
4	24
3	21
2	8
1	6
0	2
	296

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